

Badger Minerals LLC

414 10th Avenue
Menominee, MI 49858
906-352-4024

January 27, 2020

State of Wisconsin
Department of Natural Resources
Waste and Materials Management
PO Box 7921
Madison WI 53707-7921

RE: Notice of Intent to Drill

To whom it may concern,

Badger Minerals, LLC submits to your agency a Notice of Intent to Drill document outlining an exploratory drill program within Schoepke Township, Onieda County, Wisconsin. Pending state and local regulatory review and approval, this program is planned to be completed during the months of February and March of 2020 and will consist of drilling up to 10 drill holes with a total drilled footage of up to 4,000'.

Badger Minerals LLC is currently in the process of applying for a Metallic Mineral Exploration License with the State of Wisconsin. As per the requirement of this license the company has secured a Surety Bond in the amount of \$5,000. It is our understanding that the required bonding amount may increase upon review of the scope of this proposed program. Please indicate to us, at your earliest convenience, any additional bonding requirements and we will provide additional documentation of the bonding increase as soon as possible.

To set up a visit to the proposed site or for questions or requests for additional information, please contact us (contact information below).

Sincerely,

Eric Quigley
Senior Geologist
Badger Minerals LLC
O: 906.352.4024
C: 218.428.8961

Badger Minerals, LLC

414 10th Avenue

Menominee, MI 49858

906-352-4024

NOTICE OF INTENT TO DRILL

SECTIONS 4 & 9, T35N R11E,
SCHOEPKE TOWNSHIP, ONEIDA COUNTY, WISCONSIN
JANUARY 27, 2020

1 INTRODUCTION

Badger Minerals LLC is currently in the process of applying for an exploration license with the Wisconsin Department of Natural resources and would like to present the following “Notice of Intent to Drill” outlining details for a proposed exploratory drilling program in Schoepke Township, Oneida County (Figure 1). The exploration program is planned to take place in sections 4 & 9 of T35N R11E and will consist of diamond core drilling a total of up to 10 bore holes totaling a maximum of 4,000 feet. The exploration activities are currently envisioned to be carried out between January and March of 2020 pending approval from State and Local regulatory agencies.

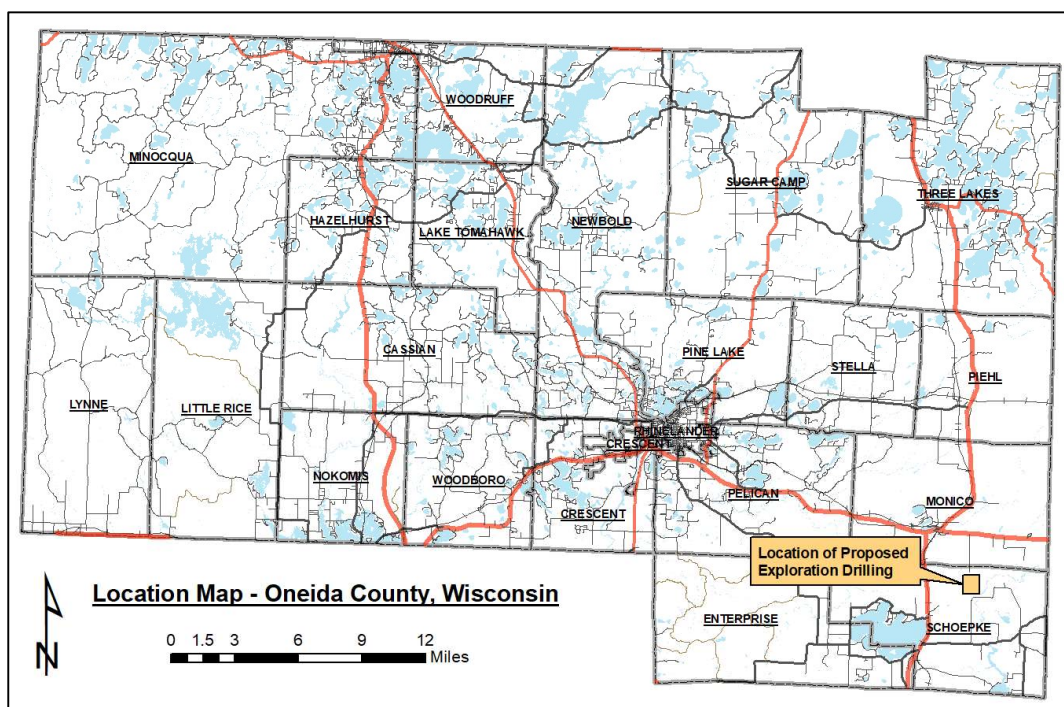


Figure 1 – Project Location Map

The objective of the proposed drilling program is to conduct an initial evaluation of the mineral potential within the project area. The area has been previously explored in the 1970's, including exploratory drilling. Past geologic reports as well as limited records obtained by the State of Wisconsin indicate that approximately 30 exploratory drill holes have been historically drilled within the two sections (Figures 2 and 3).

Drilling is targeting potential base and precious metal mineralization hosted within Paleo-Proterozoic felsic-mafic volcanic rocks of the Penokean Volcanic Belt. Within the project area, it is estimated that these host rocks are covered by 10-70' of unconsolidated glacial deposits (overburden).

2 LOCATION AND LAND DETAILS

Drilling is planned on certain parcels of privately-owned lands in sections 4 & 9 of T35N R11E. The individual parcels are either owned by Badger Minerals, LLC. or are owned by the Heartwood Forestland Group (Heartwood). Badger Minerals has entered into a Purchase Agreement with Heartwood and has been given permission to access and conduct exploration activities on the property. See Figures 2 and 3 below showing the location of proposed exploration drill holes and land ownership. Also see Table 1 below for specific details regarding the individual parcels on which drilling is planned.

Due to the nature of exploration drilling, drill hole locations are often based on the geology encountered during a drilling program. Drill site locations identified below are preliminary in nature may need to be modified during the exploration program. Final drill hole locations will be provided to and approved by DNR field staff prior to the beginning of drill site construction activities.

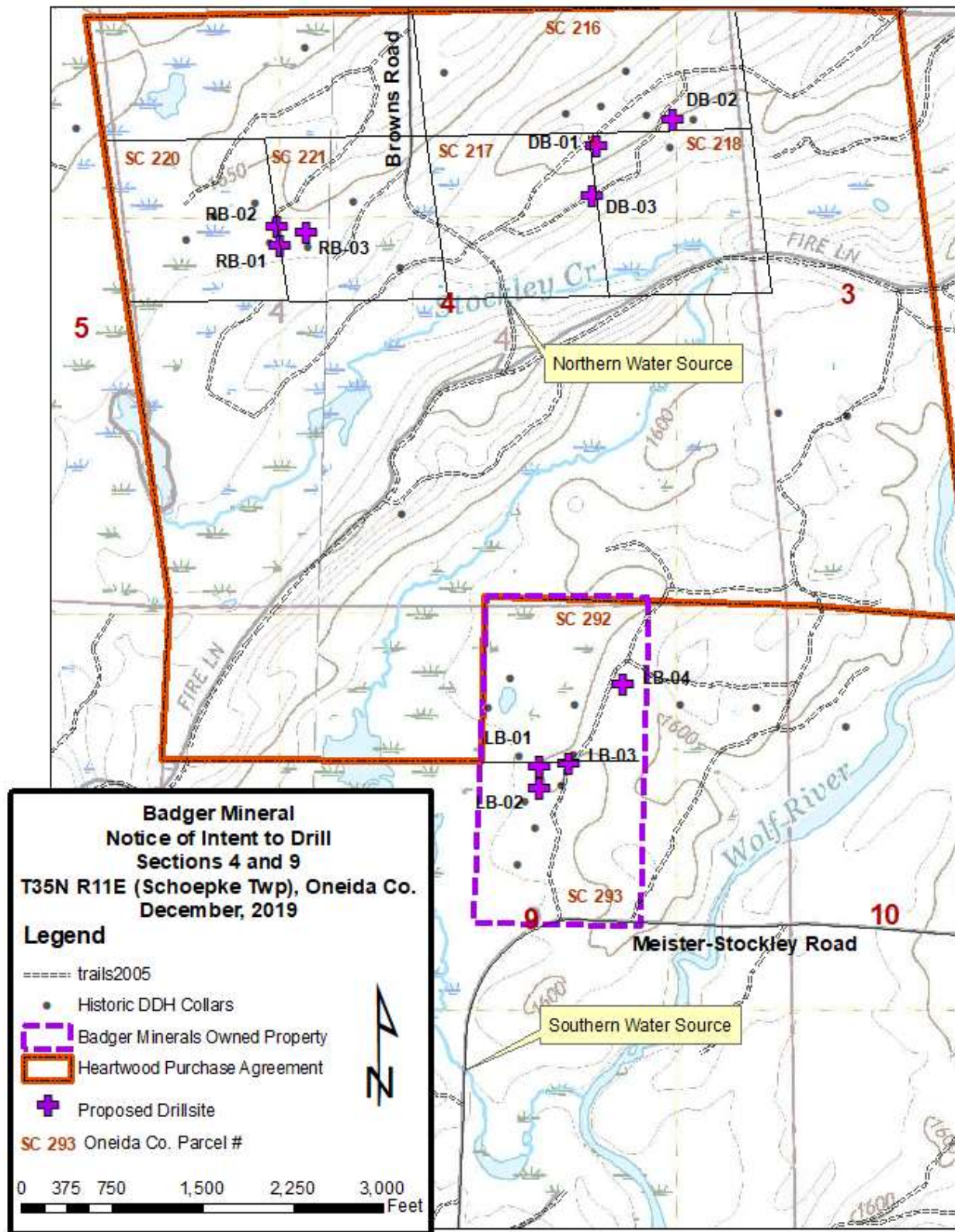


Figure 1 – Project Plan Map (topo base)

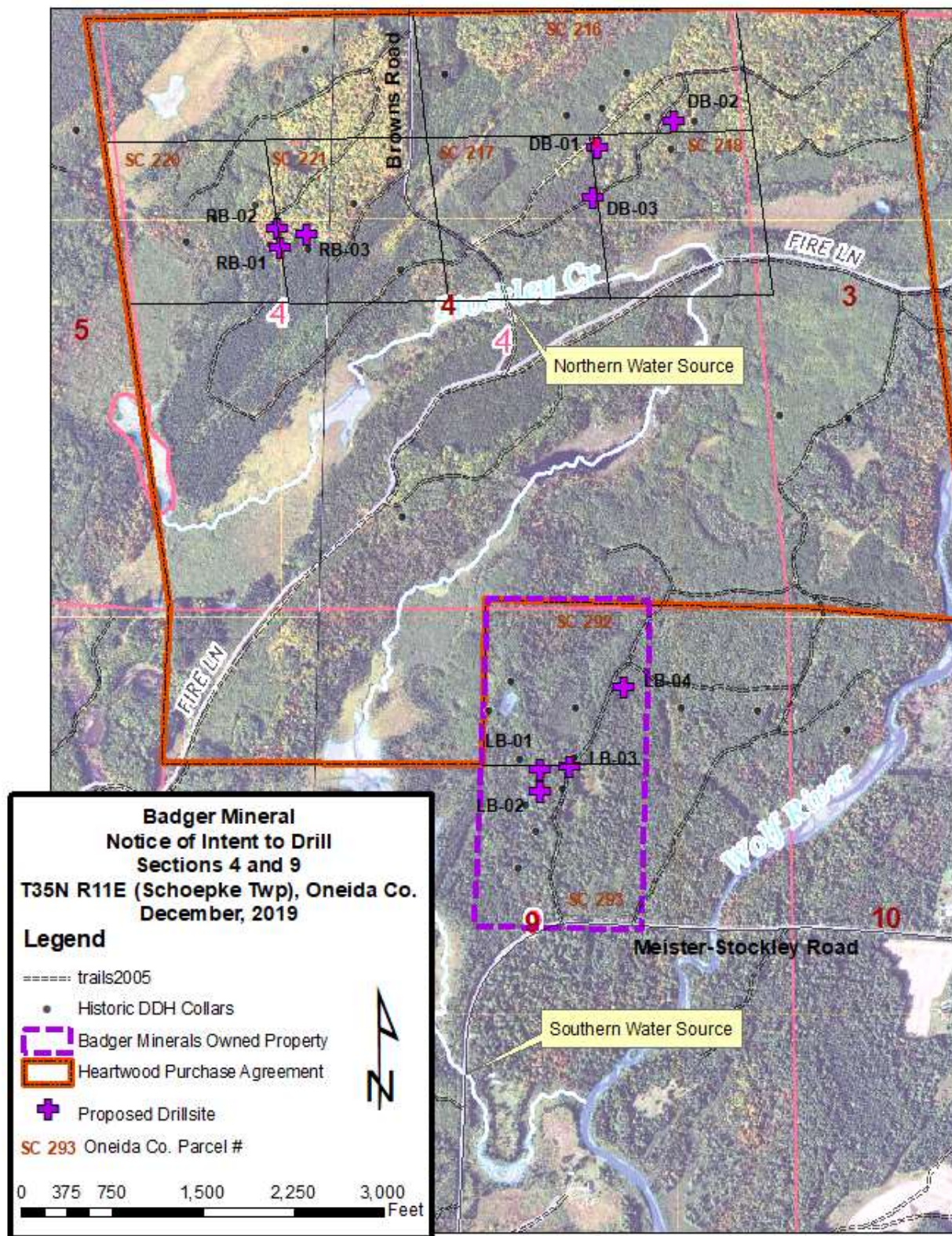


Figure 2 – Project Plan Map (ortho base)

Table 1 – Legal Description of Parcels and Parcel Details

T35N R11E (Schoepke Township), Oneida County			
<u>SECTION 4</u>			
Parcel ID SC 220	a.	Legal Desc.	SW NW
	b.	Parcel Size:	40 Acres
	c.	Owner:	Heartwood Forestland Fund VI Limited Partnership
	d.	Agreement:	Badger Minerals has entered into a Purchase Agreement with Heartwood allowing access and exploration rights on the property
	e.	Designation:	Managed Forest Land (MFL Open)
	f.	Zoning:	General Use
Parcel ID SC 221	a.	Legal Desc.	SE NW
	b.	Parcel Size:	40 Acres
	c.	Owner:	Heartwood Forestland Fund VI Limited Partnership
	d.	Agreement:	Badger Minerals has entered into a Purchase Agreement with Heartwood allowing access and permission to conduct exploration on the Property
	e.	Designation:	Managed Forest Land (MFL Open)
	f.	Zoning:	General Use
Parcel ID SC 216	a.	Legal Desc.	N FR 1/2 of NE
	b.	Parcel Size:	61.46 Acres
	c.	Owner:	Heartwood Forestland Fund VI Limited Partnership
	d.	Agreement:	Badger Minerals has entered into a Purchase Agreement with Heartwood allowing access and permission to conduct exploration on the Property
	e.	Designation:	Managed Forest Land (MFL Open)
	f.	Zoning:	General Use
Parcel ID SC 217	a.	Legal Desc.	SW NE
	b.	Parcel Size:	40 Acres
	c.	Owner:	Heartwood Forestland Fund VI Limited Partnership
	d.	Agreement:	Badger Minerals has entered into a Purchase Agreement with Heartwood allowing access and permission to conduct exploration on the Property
	e.	Designation:	Managed Forest Land (MFL Open)
	f.	Zoning:	General Use
Parcel ID SC 218	a.	Legal Desc.	SE NE
	b.	Parcel Size:	40 Acres
	c.	Owner:	Heartwood Forestland Fund VI Limited Partnership
	d.	Agreement:	Badger Minerals has entered into a Purchase Agreement with Heartwood allowing access and permission to conduct exploration on the Property
	e.	Designation:	Managed Forest Land (MFL Open)
	f.	Zoning:	General Use
<u>SECTION 9</u>			
Parcel ID SC 292	a.	Legal Desc.	NW NE
	b.	Parcel Size:	39.7 Acres
	c.	Owner:	Badger Minerals LLC
	d.	Agreement:	N/A
	e.	Designation:	N/A
	f.	Zoning:	General Use
Parcel ID SC 293	a.	Legal Desc.	SW NE
	b.	Parcel Size:	38.87 Acres
	c.	Owner:	Badger Minerals LLC
	d.	Agreement:	N/A
	e.	Designation:	N/A
	f.	Zoning:	General Use

3 PROJECT DESCRIPTION AND METHODS

Drill Site Construction

Drill sites typically occupy a space of approximately 50' x 50' to accommodate the drilling rig, support equipment (including but not limited to a dozer, water truck, pick-up truck and rod tray), and the sump. The construction of the drill site will require the clearing of small trees and underbrush in the immediate vicinity of the drill site. Final locations of drill sites will be located to avoid direct impacts to wetlands, the necessity of leveling/grading of the site, and the removal of mature trees.

At each drill site a small sump will be constructed around the drill hole collar with typical dimensions of 3' x 3' x 2' to collect water as it exits the drill casing during drilling. A main sump will also be constructed at each site to collect drilling water and drill cuttings. The Main sump will have dimensions of approximately 15' x 6' x 4'.

Drill site preparation will not begin until the final site locations are approved by WDNR field staff. Approximate locations of the proposed drill sites are contained in Table 2 and are labeled in Figures 2 and 3.

Table 2 – Drill Site Locations

Drill Site	Easting*	Northing*
RB-01	333997	5045934
RB-02	333991	5045982
RB-03	334065	5045967
DB-01	334798	5046183
DB-02	334993	5046252
DB-03	334787	5046059
LB-01	334654	5044619
LB-02	334655	5044561
LB-03	334723	5044626
LB-04	334866	5044825
*UTM Nad83 Zone 16N		

Access

Access to the project area from the north (onto Heartwood controlled lands) will be via Highway 8, south on Browne's Road (~1.5 miles) to the gated entrance onto Heartwood Land. The lands controlled by Heartwood are currently enrolled in the Managed Forest Law program which allows public access to the properties for recreational purposes. The entrance gate to the property will remain closed to prevent unauthorized motorized vehicle access during the duration of the drilling program.

Access from the south onto Badger Minerals owned land, will be via a private gated trail off of the Meister-Stockley Road.

The properties contain an extensive network of existing woodland trails which have historically been created during previous logging and exploration activities (major trails are depicted in figures 2 and 3). These trails will be utilized for accessing drill sites. No road building activities are anticipated, however, short, temporary access paths off of the existing trails will be created to access the drill sites. These paths will utilize existing openings through the woods as best as possible but may require the clearing of underbrush and small trees.

Drilling Methods

Diamond Core Drilling

The drilling rig employs a diamond-impregnated drill bit to advance an attached string of hollow drill rods into the subsurface rock formations producing a cylindrical core sample. The rock sample is evaluated (logged) by a geologist to delineate the nature of the bedrock at depth and select intervals may be split in half, sampled, and sent to an assay laboratory to determine the geochemical make-up of the rocks encountered.

Steel pipe casing (HQ diameter) will be initially drilled through the unconsolidated glacial overburden and advanced into approximately 5' of competent bedrock. The casing serves to stabilize the upper portion of the drill hole and to ensure groundwater aquifers are sealed-off from the borehole to prevent cross-contamination between aquifers and/or the introduction of any contaminants to the groundwater.

Drilling is anticipated to be NQ diameter with hole depths ranging between 350-800' in depth. Drilling will be conducted 24 hours/day across two 12-hour shifts.

Drilling Fluids

Water is utilized throughout the drilling process to cool and lubricate the drill bit as well as to flush drill cuttings generated during drilling out of the hole. In addition to water, inert, bio-degradable polymers are often used to aid in drilling. All drilling additives used will be NSF approved. The current proposed additive to be used is a Barroid product called EZ Mud.

Water Source

Water for drilling purposes will be pumped from Stockley Creek from within the project area and where the creek crosses the Meister-Stockley Road (Figures 2 and 3). Water will be pumped into a clean water truck and will be disinfected with chlorine bleach prior to usage as a drilling fluid.

Waste/Water Management

Drilling fluids (treated water +/- drilling additives) and drill cuttings (consisting of surface sands and gravels, pulverized bedrock, and drilling additives) are flushed out of the hole between the outside of the drill rods and bedrock and through the casing to the surface. The water/cuttings are collected in a small sump around the drill collar and pumped/diverted to a main sump located adjacent to the drill rig. The main sump typical has dimensions of approximately 15' x 6' x 4'. Drill cuttings within the sump are allowed to settle out to the bottom of the sump. Clean water is then pumped off the top of the sump and recirculated through the drilling process.

In all cases where drilling water contacts the ground surface, the water will be diverted either to the small sump located at the drill collar or to the main sump. As drilling is planned to be conducted during the winter months, a snow berm will be placed on the down slope edges of the drill site to prevent any drilling fluids from escaping the drill site.

Drilling with NQ sized tooling generated between 1.8 and 2.3 cubic feet of drill cuttings per 100' of drilling. At the completion of drilling at each site, excess water remaining in the main sump will be allowed time to disperse into the glacial overburden and the cuttings will be buried as the sump is backfilled. Top soil, which will be stockpiled separately during the construction of the sump, will then be placed on top of the backfilled sump.

All sources of hydrocarbons will have spill containment and absorbent materials placed beneath them, and upon completion of the drillhole, will be removed by the drilling company.

4 RECLAMATION PROCEDURES

The following section outlines details as to Badger Minerals' reclamation plan for the proposed project. While some drill holes may be temporarily abandoned so that additional exploration work can be completed on them, the majority of drill holes will be permanently abandoned during the drilling program. Additionally, all sumps, ruts, and other earth disturbances will be backfilled/leveled by the completion of the drilling program as will the removal of all equipment and drilling related materials. Final reclamation, including manual groundwork and revegetation activities will be completed during the spring/early summer of 2020 as weather and ground condition permit.

Drill Hole Abandonment

In accordance with NR 130.06(1)(4)(b), casings for temporarily abandoned boreholes will be left in place, and the upper terminal of the casing shall be sealed with a watertight, threaded or welded cap. Upon permanent abandonment of a borehole, protocol will follow that of NW 130.06(1)(a). Permanently abandoned boreholes will be filled from the bottom of the hole upward to the ground surface with concrete or neat cement grout. For the abandonment of diamond drill holes, the filling procedure will

be in compliance with NR 130.06(1)(3)(a). Filling material will be applied through a conductor pipe, except that when practical, a damp bailer will be used. When concrete is placed underwater by a conductor pipe, the bottom end of the conductor pipe shall be submerged in the concrete at all times. If circumstances are encountered where the removal of all or part of a casing from an unconsolidated formation results in caving of the borehole, Badger Minerals will comply with NR 130.06(1)(3)(b), and the casing will be removed concurrently with the filling of the drill hole, and the bottom end of the casing shall be kept below the surface of the fill material throughout the operation.

Drill Site Restoration

In compliance with s.293.01(23) and s.293.13(2)(c), restoration will follow as such:

Groundwork

- Stockpiled topsoil will be spread across all disturbed areas where topsoil was removed
- All ruts at the drill site or along access routes will be filled and leveled
- Cement from collar locations of permanently abandoned drill holes will be removed
- Threaded, water-tight cap will be placed on collars of temporarily abandoned drill holes
- Brush and small timber will be scattered, larger timber will be stacked
- Pruning seal applied to gouges/scrapes on affected trees
- All equipment will be removed from drill sites, staging grounds, access routes, etc.

Revegetation

- Revegetation of drill sites via planting of DNR-approved, non-invasive, seed mixtures
- Stabilization of access routes, staging grounds, etc. via planting of DNR-approved, non-invasive seed mixtures.
- Placement of straw over all revegetated areas, select stabilized areas.

Waste Removal

- Absorbent materials used during drilling will be removed and disposed of by drilling contractor
- Removal of protective fencings around sumps, cautionary flagging, and signage used during drilling operation
- Removal of any litter at drill site, staging grounds, access sites, etc.

5 RECLAMATION COST ESTIMATES

Badger Minerals is proposing to construct a maximum of 10 drill sites and drill a maximum of 10 drill holes with a total maximum drilled footage of 4,000 meters. While the majority of reclamation activities will be completed during the drill program this estimate assumes all costs related to drill hole abandonment, regrading, and revegetation at each of the proposed drill sites. Revegetation will likely

not be necessary over the entire footprint of the drill site, however, the estimated below assumes the entire footprint will require revegetation.

Drillhole Abandonment				
	Unit Cost	Units	Units	Total
Mob/Demob of Drill/Grouting Unit	\$ 4,000.00		1	\$ 4,000
Grouting	\$ 3.50		4000 Feet	\$ 14,000
Pulling Casing, Moving Hole to Hole 1 hr/site	\$ 250.00		10 Hours	\$ 2,500
Manual Site Rec/Seeding/Mulching				
Labor - 4 hrs per drill site	\$ 25.00		40 Hours	\$ 1,000
Seed - 75lbs/acre (max of 0.5 acres total)	\$ 42.00		40 lbs	\$ 1,680
Straw - 5 bales/drill site	\$ 12.00		25 bales	\$ 300
TOTAL				\$ 23,480